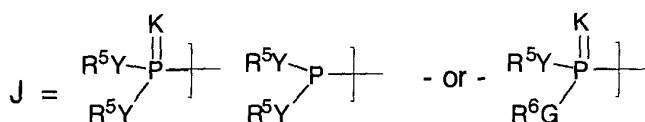5

Abstract

10   This invention concerns a new family of phosphorus-containing compounds containing a moiety JQA–

in which:

A is absent or is –O–, –S– or –NR^2–;

Q is absent or (if A is –O–, –S– or –NR^2–) Q may be –V–, –OV–, –SV–, or –NR^{2}V–, where V is an

15   aliphatic, heteroaliphatic, aryl, or heteroaryl moiety, such that J is linked to the cyclohexyl ring directly,

through A or through VA, OVA, SVA or NR^{2}VA;

K is O or S;

each occurrence of Y is independently –O–, –S–, –NR^2–, or a bond linking a R^5 moiety to P;

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each occurrence of R^2 and R^5 is independently an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety,

or H; and

each occurrence of R^6 is independently -PK(YR^5)(YR^5), -SO$_2$(YR^5) or –C(O)(YR^5); so long as any R^2,

or R^5 moiety linked directly to P is not H;

25   wherein two R^2, R^5 and/or R^6 moieties may be chemically linked to one another to form a ring;

each occurrence of G is independently –O-, -S-, -NR^2- or (M)$_x$;

each occurrence of M is independently a substituted or unsubstituted methylene moiety, and any M-M'

moiety may be saturated or unsaturated;

30

each occurrence of x is independently an integer from 1-6; and the other variables are as defined

herein.